

Serial No.: 10/821,520

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) An acoustic transducer comprising:
a frame;
a magnet mounted on the frame, where the magnet and the frame forms
a gap and the magnet produces a magnetic field region in the gap;
a sheet of diaphragm material folded into portions comprising:
a substantially planar portion, and
at least one fin portion; and
a voice coil mounted on the fin portion and immersed in the magnetic
field region.

2. (Cancelled)

3. (Currently Amended) The ~~low-profile~~ acoustic transducer of claim 1, where a 90° fold in the sheet of diaphragm material is adjacent to a 180° fold in the sheet of diaphragm material.

Serial No.: 10/821,520

4. (Currently Amended) The ~~low-profile~~ acoustic transducer of claim 1, where two 90° folds in the sheet of diaphragm material are adjacent to a 180° fold in the sheet of diaphragm material.

5. (Currently Amended) The ~~low-profile~~ acoustic transducer of claim 1, where a first 90° fold in the sheet of diaphragm material is adjacent to a second 90° fold and the second 90° fold is adjacent to a 180° fold in the sheet of diaphragm material.

6. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material is a sheet of electrically non-conductive material.

7. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material comprises a sheet of electrically non-conductive material to which is bonded a conductive trace for the voice coil.

8. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material comprises a sheet of electrically conductive material.

Serial No.: 10/821,520

9. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material comprises a polymer material.

10. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material is a sheet of polyethylenenaphthalate material.

11. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material is a sheet of polyester material.

12. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material is a sheet of MYLAR.

13-16. (Canceled)

Serial No.: 10/821,520

17. (Currently Amended) A low-profile transducer comprising:
a frame;
a sheet of diaphragm material folded into portions comprising:
a ~~planar~~ projection surface portion, and
a fin portion;
~~a voice coil mounted on the fin portion;~~
a magnet structure mounted on the frame, where the magnet structure
and the frame forms a gap and the magnet structure produces a magnetic-field region
in the gap; and
an electrically conductive voice coil coupled to the sheet of diaphragm
material and extending out of a plane of the projection surface;
where the voice coil resides at least partially in the magnetic-field
region.

18. (Original) The low-profile transducer of claim 17, where the
connection is a pliable surround.

19. (Original) The low-profile transducer of claim 17, where the
voice coil is mounted on the fin.

Serial No.: 10/821,520

20. (Original) The low-profile transducer of claim 19, where the fin extends in a direction substantially perpendicular to the projection surface.

21. (Original) The low-profile transducer of claim 17, where the frame comprises a ferromagnetic material.

22. (Original) The low-profile transducer of claim 17, where the frame comprises a ferromagnetic material, and where the frame provides a return path for a magnetic field generated by the magnet structure.

23. (Original) The low-profile transducer of claim 17,
where the frame comprises a ferromagnetic material,
where the magnet structure comprises a magnet and a portion of the
frame, and

where the magnetic-field region is formed between the magnet and the
portion of the frame.

24. (Original) The low-profile transducer of claim 17, where the
frame is non-ferromagnetic.

Serial No.: 10/821,520

25. (Original) The low-profile transducer of claim 17, where the frame is non-ferromagnetic and where the magnet structure comprises a magnet and a ferromagnetic material.

26. (Original) The low-profile transducer of claim 17, where the frame has a substantially crenellated shape.

27. (Original) The low-profile transducer of claim 17, where the frame includes a groove.

28. (Original) The low-profile transducer of claim 17, where the projection surface of the diaphragm is in the shape of a rectangle.

29. (Original) The low-profile transducer of claim 17, further comprising a filler material attached to the projection surface, and a second sheet of material attached to the filler material, where the filler material and the second sheet provide additional rigidity to the projection surface.

30. (Original) The low-profile transducer of claim 17, further comprising a second sheet of material attached to the projection surface.

Serial No.: 10/821,520

31. (Original) The low-profile transducer of claim 17, where the frame comprises a groove, and where the magnet structure is adjacent to the groove.

32. (Original) The low-profile transducer of claim 17, where the voice coil comprises an insulated metal wire.

33-34. (Canceled)